

CLAIMS

1. A method of producing a crosslinked network structure made from soybean flour as a main raw material comprising:

mixing and kneading a mixture of raw materials containing soybean flour, yeast or a foaming agent, and water as main raw materials, containing neither wheat flour gluten nor silk fibroin and optionally containing a flavor improver or quality improver as a side raw material to prepare viscoelastic dough in a manner such that the mixed raw materials is dispersed and mixed uniformly, and that 100 parts by weight of soybean flour consisting of 65 to 100% by weight of soybean flour of dehulled soybeans, or raw soybean flour, or both and 0 to 35% by weight of defatted soybean flour blends with 70 to 140 parts by weight of water, thereby the dough having a viscosity of 1×10^3 to 7.8×10^4 (Pa·s) at a shear rate of 0.01 (/s);

foaming and extending the obtained dough by fermentation action of the yeast or by foaming action of the foaming agent; and

subjecting the foamed and extended dough to a heat treatment.

2. A method according to claim 1, wherein the flavor improver or quality improver is selected from the group consisting of sugars, oils and fats, milk products, egg, table salt, rice flour, barley flour, starch, and sorghum flour.

3. A viscoelastic dough containing soybean flour as a main raw material for foamed food comprising:

a mixture of raw materials containing soybean flour, yeast or a foaming agent, and water as main raw materials, containing neither wheat flour gluten nor silk fibroin and optionally containing a flavor improver or quality improver as a side raw material, the raw materials being dispersed and mixed uniformly in a manner such that 100 parts by weight of soybean flour consisting of 65 to 100% by weight of soybean flour of dehulled soybeans, or raw soybean flour, or both and 0 to 35% by weight of defatted soybean flour blends with 70 to 140 parts by weight of water by way of mixing and kneading, thereby having a viscosity of 1×10^3 to 7.8×10^4 (Pa·s) at a shear rate of 0.01 (/s),

wherein the flavor improver or quality improver is selected from the group consisting of sugars, oils and fats, milk products, egg, table salt, rice flour, barley flour, starch, and sorghum flour.

4. A powdery raw material for basic preparation comprising:
soybean flour as raw material; and

at least one member selected from the group consisting of table salt, powdered sugars, powdered milk products, powdered oils and fats, powdered egg, rice flour, barley flour, starch,

and sorghum flour as a flavor improver or quality improver in combination with the soybean flour as raw material containing neither wheat flour gluten nor silk fibroin.

5. A foamed food containing soybean flour as a main raw material obtained by way of: foaming and expanding the dough for foamed food according to claim 3 by fermentation action by yeast or foaming action by a foaming agent; then molding the resultant; and subjecting the resultant to a heat treatment to form a crosslinked network structure.

6. A foamed food containing soybean flour as a main raw material according to claim 5, wherein the flavor improver or quality improver is selected from the group consisting of sugars, oils and fats, milk products, egg, table salt, rice flour, barley, starch, and sorghum flour.

7. A foamed food according to claim 5 or 6, wherein the foamed food is bread, and wherein the heat treatment after the foaming and expansion is performed by way of baking or steaming to form a sponge-like crosslinked network structure.

8. A dough for foamed food comprising:
sponge dough comprising a soft base dough obtained by way

of adding and mixing 100 parts by weight of wheat flour, 100 to 140 parts by weight of water based on 100 parts by weight of wheat flour component, yeast or a foaming agent, and optionally water-soluble food fiber in a manner such that formation of a network structure of gluten is allowed to be promoted, thereby having sufficient viscoelasticity and shrinkage; and

soybean dough comprising a mixture of raw materials containing soybean flour as a main raw material and optionally containing a part or all of water and a side raw material of flavor improver or quality improver, the raw materials being dispersed and mixed uniformly in a manner such that 100 parts by weight of soybean flour consisting of 65 to 100% by weight of soybean flour of dehulled soybeans, or raw soybean flour, or both and 0 to 35% by weight of defatted soybean flour blends with 70 to 140 parts by weight of water by way of mixing and kneading, thereby having a viscosity of 1×10^3 to 2×10^5 (Pa·s) at a shear rate of 0.01 (/s),

the sponge dough and the soybean dough being mixed in a ratio such that an amount of the soybean flour is more than 50 parts by weight and an amount of the wheat flour is less than 50 parts by weight with a total of amounts of the soybean flour and the wheat flour being 100 parts by weight.

9. A dough for foamed food according to claim 8, wherein the

soybean flour comprises raw soybean flour, or defatted soybean flour, or both made from a lipoxygenase-completely deficient soybean having no immature flavor.

10. A foamed food made from the dough for foamed food according to claim 1.

11. A foamed food according to claim 10, wherein the soybean flour comprises raw soybean flour, or defatted soybean flour, or both made from a lipoxygenase-completely deficient soybean having no immature flavor.

12. A sponge dough of a wheat raw material for foamed food containing soybean flour as a raw material comprising:

a soft base dough obtained by way of adding and mixing 100 parts by weight of wheat flour, 100 to 140 parts by weight of water based on 100 parts by weight of wheat flour component, yeast or a foaming agent, and optionally water-soluble food fiber in a manner such that formation of a network structure of gluten is allowed to be promoted, thereby having sufficient viscoelasticity and shrinkage.

13. A soybean raw material dough to be mixed with the sponge dough according to claim 12 comprising:

a mixture of raw materials containing soybean flour and optionally containing a part or all of water and a side raw material of flavor improver or quality improver, the raw materials being dispersed and mixed uniformly in a manner such that 100 parts by weight of soybean flour consisting of 65 to 100% by weight of soybean flour of dehulled soybeans, or raw soybean flour, or both and 0 to 35% by weight of defatted soybean flour blends with 70 to 140 parts by weight of water by way of mixing and kneading, thereby having a viscosity of 1×10^3 to 2×10^5 (Pa·s) at a shear rate of 0.01 (/s).

14. A soybean raw material dough according to claim 13, wherein the soybean flour comprises raw soybean flour, or defatted soybean flour, or both made from a lipoxygenase-completely deficient soybean having no immature flavor.

15. A method of producing foamed food containing a large amount of soybean flour comprising:

subjecting the sponge dough of the wheat raw material according to claim 12 as a sponge to first fermentation to effect fermentation thereof sufficiently in advance;

mixing the fermented sponge dough with the soybean raw material dough according to claim 14;

molding the resultant mixture;

subjecting the molded mixture to second fermentation; and
treating the molded and fermented mixture by way of baking
or steaming in an oven, heating in a microwave oven, or frying
in oil.

16. A method of producing foamed food according to claim 15,
wherein the soybean flour comprises raw soybean flour, or defatted
soybean flour, or both made from a lipxygenase-completely
deficient soybean having no immature flavor.